

Application No.: 10/701,044

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Cancel Claim 1

2. (currently amended) A circuit for measuring sensing power in a source of radio frequency energy, comprising:

a Wheatstone bridge having a pair of parallel circuit paths disposed between a pair of input nodes, such input nodes being coupled to the source of radio frequency energy, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of a pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the radio frequency energy from the source of the radio frequency energy passing therethrough through said at least one element differently from radio frequency energy from the source of the radio frequency energy passing through at least one other element in the other one of the pair of paths.

3. (currently amended) The circuit recited in claim 2 wherein a first one of the input nodes are also coupled to a source of the radio frequency energy and to a source of dc energy.

4. (original) The circuit recited in claim 3 including a feedback loop responsive to a voltage produced across the output node for providing a control voltage to the first one of the pair of input node.

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5. (currently amended) The circuit recited in claim 2-A circuit for sensing radio frequency energy, comprising:

a Wheatstone bridge having a pair of parallel circuit paths disposed between a pair of input nodes, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of a pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the radio frequency energy passing therethrough differently from radio frequency energy passing through at least one other element in the other one of the pair of paths; and,

wherein the first one of the paths includes a capacitor disposed in shunt with an electrical element having an electrical property varying with the radio frequency energy passing through such electrical element.

6. (original) The circuit recited in claim 5 wherein the electrical property is electrical resistance.

7. (currently amended) A circuit for sensing radio frequency energy, comprising:

a Wheatstone bridge having a pair of parallel circuit paths disposed between a pair of input nodes, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of a pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the power passing therethrough differently from power passing through at least one other element in the other one of the pair of paths;

wherein a first one of the input nodes is coupled to a source of the radio frequency energy and to a source of dc voltage; and

a feedback loop responsive to a voltage produced across the output node for providing a control voltage to the first one of the pair of input node.

8. (previously presented) The circuit recited in claim 7 wherein the first one of the paths includes a capacitor disposed in shunt with an electrical element having an electrical property varying with the radio frequency energy passing through such electrical element.

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9. (original) The circuit recited in claim 7 wherein the electrical property is electrical resistance.

10. (original) The circuit recited in claim 9 wherein the electrical property is thermal resistance;

11. (original) The circuit recited in claim 9 wherein the electrical property is thermal sensitivity.

12. (currently amended) A method for sensing power comprising:

(A) providing a Wheatstone bridge having:

a pair of parallel circuit paths disposed between a pair of input nodes, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of a pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the power passing therethrough differently from power passing through at least one other element in the other one of the pair of paths and wherein a first one of the input nodes is coupled to a source of the radio frequency energy and to a source of dc voltage; and

a feedback loop responsive to a voltage produced across the output node for providing a control voltage to the first one of the pair of input node;

(B) applying a first type of power to the bridge with the feedback loop providing a voltage to the first one of the node and with such bridge being in a balanced condition within the bridge; and

(C) applying a second type of power to the bridge with the bridge becoming imbalanced from such applied second power and with the feedback loop changing the voltage to the first node, such changed voltage providing an indication of the application of the second type of power.

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13. (original) The method recited in claim 12 wherein the first type of power is dc power and the second power is RF power.

Cancel claim 14.

Cancel claim 15.

16. (currently amended) The circuit recited in claim 15-A circuit for sensing radio frequency energy, comprising:

a network having:

four nodes, one pair thereof being input nodes and a pair of different nodes thereof being output nodes; and
a pair of parallel circuit paths disposed between the pair of input nodes, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of the pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the radio frequency energy passing therethrough differently from radio frequency energy passing through at least one other element in the other one of the pair of paths; and

wherein a first one of the input nodes is coupled to a source of the radio frequency energy and to a source of dc voltage.

17. (previously presented) The circuit recited in claim 16 including a feedback loop responsive to a voltage produced across the output node for providing a control voltage to the first one of the pair of input node.

18. (currently amended) The circuit recited in claim 15-A circuit for sensing radio frequency energy, comprising:

a network having:

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four nodes, one pair thereof being input nodes and a pair of different nodes thereof being output nodes; and

a pair of parallel circuit paths disposed between the pair of input nodes, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of the pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the radio frequency energy passing therethrough differently from radio frequency energy passing through at least one other element in the other one of the pair of paths; and

wherein the first one of the paths includes a capacitor disposed in shunt with an electrical element having an electrical property varying with the radio frequency energy passing through such electrical element.

19. (previously presented) The circuit recited in claim 18 wherein the electrical property is electrical resistance.

Cancel claim 20.

Cancel claim 21.

22. (currently amended) A method for sensing power comprising:

(A) providing a a-network having:

four nodes, one pair thereof being input nodes and a pair of different nodes thereof being output nodes;

a pair of parallel circuit paths disposed between the pair of input nodes, each path having a pair of serially connected elements, each pair of elements in each one of the paths being connected at a corresponding one of the pair of output nodes, at least one element in a first one of the pair of paths being thermally responsive to the radio frequency energy passing therethrough therethrough differently from radio frequency energy passing through through at least one other element in the other one of the pair

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of paths wherein a first one of the input nodes is coupled to a source of the radio frequency energy and to a source of dc voltage; and

a feedback loop responsive to a voltage produced across the output node for providing a control voltage to the first one of the pair of input node;

(B) applying a first type of power to the network with the feedback loop providing a voltage to the first one of the node and with such network being in a balanced condition within the network; and

(C) applying a second type of power to the network with the network becoming imbalanced from such applied second power and with the feedback loop changing the voltage to the first node, such changed voltage providing an indication of the application of the second type of power.

23. (previously presented) The method recited in claim 22 wherein the first type of power is dc power and the second power is RF power.

24. (new) The circuit recited in claim 2 including a feedback loop responsive to a voltage produced across the output node for providing a control voltage to the first one of the pair of input node.